

**To:** Hoff, Melanie[Hoff.Melanie@epa.gov]  
**From:** Greenberg, Marc  
**Sent:** Sat 8/15/2015 9:20:23 PM  
**Subject:** Re: Management Report for the Gold King Mine Release - 8/13 to 8/4 Operational Period

I just saw that you forwarded to Terry. So disregard my last message. I'll just forward it to the situation unit and cc you on it. Thanks.

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Marc S. Greenberg, Ph.D.  
Deputy Branch Chief  
U.S. EPA  
Environmental Response Team  
609-865-3924 cell

Message sent via EPA wireless device

On Aug 15, 2015, at 5:18 PM, Greenberg, Marc <[Greenberg.Marc@epa.gov](mailto:Greenberg.Marc@epa.gov)> wrote:

Melanie,

The OEM EOC writes these.  
I'll forward you a note so you can see how to get info into their hands for their reporting.

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Marc S. Greenberg, Ph.D.  
Deputy Branch Chief  
U.S. EPA  
Environmental Response Team  
609-865-3924 cell

Message sent via EPA wireless device

On Aug 15, 2015, at 5:04 PM, Hoff, Melanie <[Hoff.Melanie@epa.gov](mailto:Hoff.Melanie@epa.gov)> wrote:

Who assembles these reports? Maybe you can get a sentence in about HQ OSRTI putting into place additional capacity for sample analyses should it be needed. My staff spent the better part of two days working with the region to determine R8's analytical needs. So the CLP is ready should additional capacity be needed.

Can you get that language in there somewhere?

Thx.

Sent from my iPhone

On Aug 15, 2015, at 3:22 PM, Greenberg, Marc <[Greenberg.Marc@epa.gov](mailto:Greenberg.Marc@epa.gov)> wrote:

Hi Melanie. Are you getting these?

**From:** Eoc, Epahq

**Sent:** Saturday, August 15, 2015 3:04 PM

**Subject:** Management Report for the Gold King Mine Release - 8/13 to 8/4  
Operational Period

**This report is being sent as a bcc to prevent accidental Reply to All messages.**

**UNCLASSIFIED//FOR OFFICIAL USE ONLY**

<image001.png>

For Internal Use Only

Gold King Mine Release

EPA Internal Update: August 15, 2015 1500 ET

### **Situation Summary**

Overview: On August 5, 2015, EPA was conducting an investigation of the Gold King Mine near Silverton, Colorado, to assess the on-going water releases from the mine, treat mine water, and assess the feasibility of further mine remediation. While excavating loose material that had collapsed into the cave entry, pressurized water began leaking above the mine tunnel, spilling an estimated

three million gallons of water stored behind the collapsed material into Cement Creek, a tributary of the Animas River. The release's path currently flows through three of EPA's regions: Region 8—Colorado, Utah and the Southern Ute Tribe; Region 6--New Mexico; and, Region 9--Navajo Nation. The mine water is being treated in a series of four settling ponds constructed near the portal. The La Plata County Sheriff issued an order closing the Animas River to all watercraft from the north County line (San Juan County, Colorado) to the south County line (at the Colorado/New Mexico State line); the La Plata County Sheriff opened the Animas River to recreational use on August 14 with a health advisory from Colorado Department of Public Health and Environment (CDPHE). EPA's Airborne Spectral Photometric Environmental Collection Technology (ASPECT) aerial reconnaissance combined with observations on the ground indicate that the plume associated with the Gold King Mine release has dissipated downstream. There is no leading edge of contamination visible in downstream sections of the San Juan River or in Lake Powell.

Administrator McCarthy arrived in Durango, CO on August 12, 2015 to tour the Animas River and meet with members of Unified EPA Area Command. On August 13, 2015, the EPA Administrator was in Farmington, NM where she held a press conference and met with local officials including water quality managers.

Public Website: A public-facing website has been created for the response: <http://www2.epa.gov/goldkingmine>. Sampling data has, and will continue to be, posted to this website.

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Response Organization: EPA is integrated in Unified EPA Area Command in Durango, CO and in three Incident Command Posts (ICPs) in Silverton and Durango, CO and Farmington, NM. The Farmington, NM ICP is composed of two branches: one in Farmington, NM and another in Lake Powell at the Arizona and Utah Border. Unified EPA Area Command stood up operations in Durango, CO with representatives from several EPA Regions. Activities underway include:

- Coordinating activities from the various Incident Command Posts in the Regions.
- Consolidating situation reports from the ICPs into a single Unified EPA Area Command situation report.

- Routing resource and funding requests from the ICPs to HQ EOC
- Reviewing sampling data and developing public messaging to include the development of a wider message that river conditions are returning to normal. This will include the development of Question and Answer sheets and fact sheets.
- Determining staffing needs for EPA hotlines and to develop a plan to consolidate data from the various call centers and establish a central database for this call data.
- To prepare for visits scheduled next week by Congressional members and OSWER Headquarters personnel.
- To minimize fatigue of response and IMT personnel and to provide CISM.
- To conduct safety risk management and mitigation practices.

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The Headquarters Emergency Operations Center (HQ EOC) activated to Level 1 Operations on Tuesday, August 11, 2015.

### **Unified EPA Area Command (UEAC)**

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UEAC has activated for this response and will consolidate situation reports, coordinate data messaging, establish screening levels, manage the toll-free general incident hotline phone number, and coordinate finance and resource requests from the Regional ICPs to HQ EOC.

### **Region 8 UICP (Durango and Silverton, CO)**

Water Sampling: The EPA initiated a surface water quality sampling effort on August 5, 2015, to assess the impacts of the release at the Gold King Mine. Region 8 has also been coordinating private well sampling, with both EPA and State teams (including contractors) collecting well samples in Colorado. EPA has been sampling all wells that have been requested, but is now creating a

prioritization process since the demand is so high. Region 8 staff have created a list of private wells in the alluvial zone near the river, and is now sorting that list by distance to the river. The analysis of these samples include pH, dissolved concentrations of metals and total metals. To date, 226 requests have been received. Bottled water shipments from local suppliers have been occurring daily and distributed as requested. As of August 13, 2015 1,120 cases of bottled water have been purchased to hand out to the community.

All municipal drinking water systems along the Animas River in Colorado, New Mexico, and Utah either are using alternate water sources or have enough clean source water stored that they have not had to shut down.

<b>System Name</b>	<b>Population</b>	<b># Days Water Available</b>
Durango, CO	23,000	Indefinite, using another source
Glacier Club, CO	525	Indefinite, using stored water and another source
No impacted systems in Utah, all have groundwater sources	N/A	N/A

Surface Water & Sediment Sampling: Baseline surface water quality data from the past 17 years has been obtained, and will be interpreted along with the new water quality data. Surface water quality samples were collected from 7 locations near Silverton, CO; two of these locations were on Cement Creek, and five of these were on the Animas River in Colorado. Samples from 19 of the 20 planned sediment sampling locations were completed by the EPA contractor sampling teams. Region 8 continues to operate four treatment and sedimentation ponds at the mine site and are treating water by lowering acidity levels and removing dissolved metals. Treated water from the last treatment pond is discharging into Cement Creek and is measured at levels below (higher pH and lower levels of metals) the pre-event, background conditions in the creek. A pilot test flush of the Animas Consolidated Irrigation Ditch occurred on August 12, 2015. The purpose of the test was to visually evaluate sediment transport conditions that would occur upon partially opening the control gate. Ferrous sediments were observed to have been deposited bank to bank in the channel as a result of the mine release. The Animas Consolidated Irrigation Ditch and Reid Irrigation Ditch are now fully open and being used for irrigation.

Agriculture/Livestock: EPA Region 8 distributed 26,220 gallons of water for livestock and other agricultural purposes. Fish cages placed directly into the Animas River by the State of Colorado Division of Parks and Wildlife (CDPW) indicate only one fish mortality out of 108 fish tested. A Colorado State veterinarian has cleared water use for animals.

### **Region 6 UICP (New Mexico Command, Farmington, NM)**

General Call-in Phone Number: Region 6 created a general incident hotline phone number for Regions 6, 8, and 9: (844) 607-9700. This number has received 38 calls to date from all three regions.

Water Sampling: On August 14, 2015, the New Mexico Environment Department (NMED) lifted the ban on the use of private domestic water wells. Sampling continues at private water wells within 500 feet of the river and at a depth of less than 100 feet. EPA staff assisted (NMED) in analyzing the water samples local residents brought to the San Juan County Fairgrounds. It is estimated that 500 samples have been received by the State of New Mexico's mobile lab.

EPA received validated data for private drinking water well samples that were taken on August 10, 2015, and preliminary data for private drinking water well samples that were taken on August 11. Initial hydrologic data shows it is a gaining river.

Based on conversations with the State of New Mexico and drinking water systems on August 11, 2015, the following is the list of affected water systems and their status:

<u>System Name</u>	<u>Population</u>	<u># Days Water Available</u>
Aztec Domestic Water System	6800	10
Farmington Water System	47,000	60
Lower Valley WUA	8,428	6
Morningstar Water Supply System	6,423	3-5
Northstar WDWCA	4,123	30

Southside Mutual Domestic	1,593	3-5, getting water from Aztec
Upper La Plata WUA	2,265	Getting water from Aztec and Farmington
Flora Vista	4,300	1, getting water from Aztec
<b>Total Population</b>	<b>80,932</b>	-

The Region 6 EPA Incident Command and NMED Drinking Water Bureau focused efforts on getting water to the Town of Morningstar because their water supply is at critical levels and the Town reported only three to five days of supply remaining.

Surface Water & Sediment Sampling: Nine (9) surface water and sediment samples were collected from the public drinking water intake locations. Three (3) of the nine sediment samples had visible discolored sediment material. One (1) of these samples was from Farmington, NM and two were from Aztec, NM. Validated laboratory data from August 8, 2015, pre- and post-slug surface water samples, has been received. The results indicate the concentration of metals in the river do not appear to cause harm to aquatic life, livestock, crops and people using the river for recreational activities. All the sample locations had pH levels within the pH range specified by the State of New Mexico. New Mexico Surface Water data were posted to the incident website on August 13, 2015.

EPA received validated data on August 13, 2015, for sediment samples that were taken on August 10, 2015, validated data for surface water samples that were taken on August 9 and 10, 2015, and preliminary data for surface water and sediment samples taken on August 11, 2015.

EPA collected twenty-nine irrigation ditch sediment samples. Three of the twenty-nine samples were from critical locations and were couriered to the lab in Albuquerque. The courier was escorted by law enforcement to the laboratory to expedite sample receipt. EPA will receive preliminary data for these three priority samples on August 14, 2015. EPA will receive preliminary data on the remaining twenty-six samples on August 15, 2015.

Agriculture/Livestock: On August 13, 2015, EPA made deliveries to 6 agriculture and 3 livestock locations, totaling 298,683 gallons. Since August 11, 2015, Region 6 has made water deliveries to 13 agriculture and 8 livestock locations,

totaling 532,623 gallons.

The R6 Incident Command in Farmington received the community outreach package and will distribute copies at the San Juan County Fair, residences where private wells are sampled, and at community meetings.

### **Region 9 ICP (Navajo Command, Farmington, NM)**

Water Sampling: Potentially impacted public water systems have been notified and precautions are in place to ensure drinking water in homes is protected. Monitoring is being conducted by several agencies including US Geological Survey (USGS), Utah Division of Water Quality (UDWQ), and the USGS Utah Water Science Center.

Two public water systems operated by Navajo Tribal Utility Authority (NTUA) draw from or are hydrologically-connected with the San Juan River. One system is receiving hauled water paid for by EPA and the other has an alternate source which they were using at the time of the spill. The source wells for the NTUA - Montezuma Creek public water system were shut down prior to the contaminant plume reaching the area. Water is being hauled from the NTUA – Aneth water system to fill the storage tanks of the Montezuma Creek water system. The intake to the NTUA Mexican Hat water system was shut down a week prior to the discharge due to high turbidity (i.e., muddy) water in the San Juan River, as per their standard operating procedures. Water is being hauled to the Mexican Hat treatment system from the NTUA Oljato water system. The Mexican Hat water system serves the community of Halcito.

NTUA has initiated sampling of the three wells at Montezuma Creek and at the intake of the Mexican Hat surface water plant. Samples were collected on August 9, 10 and 13, 2015. The samples will be analyzed for the full suite of drinking water regulated inorganic, volatile, and semi-volatile compounds.

Surface Water & Sediment Sampling: Six (6) Region 9 Superfund Technical Assistance and Response Team (START) members supported surface water and



sediment sampling at 11 locations along the San Juan River. In total, 11 surface water investigative samples and 2 duplicate surface water samples were collected for QA/QC purposes. Sediment samples were additionally collected from each location from surface sediments (~ 0 - 2" below surface) for a total of 12 samples (11 investigative and 1 duplicate). Preliminary data was received and validated for surface water samples collected on August 9, 2015.

Agriculture/Livestock: The Emergency and Rapid Response Services (ERRS) contractor procured ten (10) water trucks for delivery of needed water to local farmers for livestock.

*Public Information/Community Outreach*: A Region 9 OSC delivered remarks in an open mic format over Navajo AM radio KNDN before his presentation before the Shiprock Chapter. EPA Region 9 staff will present the status of Region 9 response activities to sample the San Juan River and provide water services at two public meetings on Friday, August 15, 2015 at Aneth Chapter and Oljeto Chapter to residents. A more concrete schedule for meeting with each chapter of Navajo Nation is being established.

## **EPA Headquarters**

The HQ EOC has been activated at Level 1 for this incident. HQ EOC tasks include:

- coordination of regional staffing and funding needs;
- participation in data calls to assist with interpretation of water and sediment data;
- exploration of various authorities and funding sources that might be available to the Agency in responding to this incident;
- determination of which public drinking water systems use the Animas River as a water source, if these systems have alternate sources for intake water, and how many days' supply they have; and
- assist with the development of messages for the public-facing website on the suitability of the water for various uses (i.e., drinking, recreational, agricultural, livestock).

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HQ EOC EU and ORD: The HQ Environmental Unit (EU) has a list of labs via OEM's Environmental Response Laboratory Network (ERLN). The EU coordinated a daily release of data results with Unified EPA Area Command. In addition, the EU evaluated data and assisted with the development of conclusions to Unified EPA Area Command on Region 6 surface water samples. The ORD Desk reviewed the Region 8 sediment quality data using the two tier approach - determining if the concentrations exceeded historical values and then examined to see if it exceeded the regional screening levels (RSLs). The ORD Desk also provided assistance to the PIO through review of the key messages.

HQ EOC Water: The EOC Water Desk is trying to track down the source of an EPA widely-cited statistic that "40% of all western headwaters are polluted with hardrock mining waste." In addition, the Water Desk is updating information on number of days of water availability for drinking water plants in New Mexico and is assisting the HQ EOC PIO with responses to various inquiries

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HQ EOC OGC: A claims process exists for compensating citizens who suffer personal injury or property damage caused by U.S. government actions. The process is available in EPA's regulations at 40 CFR Part 10, and includes guidance on documentation that may be required to support claims for loss of employment and loss of income, among other claims.

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HQ EOC PIO: EPA issued four press releases regarding the Gold King Mine Release incident, on August 8, 11, 12 and 13, 2015 respectively. The HQ EOC PIO has received approximately 50 press inquiries. In addition, the PIO is/has:

- posted Administrator McCarthy's video and statement about EPA ceasing field investigation work at mine sites, including tailings facilities;
- working to find subject-matter experts (SMEs) to serve as JIC reachback personnel;
- worked with the UEAC PIO to develop public messaging designed to explain data results and provide possible protective actions;
- reviewed *EPA Highlights* developed by Public Engagement staff;
- developed a draft claims submission fact sheet for impacted parties to show economic damages experienced by the mine release; and
- reviewed and approved statements and social media posts. The posts are being translated and will be put on the Spanish Facebook and Twitter accounts;
- reviewed and posted a GIS map of surface water sampling data; and

- provided vetted and approved responses to press officers resulting in closed media queries.

HQ EOC ATSDR: The ATSDR Desk supported the EU in evaluating incoming sampling data and the PIO in crafting appropriate health messaging.

HQ EOC Finance: EPA is still collecting financial information for this incident but the Finance Desk conducted the following activities:

- Sent out Site Specific Charging Guidance to Regional Comptrollers and Senior Budget Officers (SBOs);
- Prepared spreadsheet to collect employee information for Pay Cap Waiver;
- Sent out data call to Regions and Program Offices to collect employee information for Pay Cap Waiver;

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The Finance Desk will be on reachback status for August 15 and 16. For the weekend, employees who have travel questions, should contact the Travel Help Desk (513) 487-2346. The traveler will hear instructions on who to contact for Gold King Mine related travel.

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Other HQ activities:

- After multiple flyovers, ASPECT reconnaissance indicates that the plume associated with the Gold King Mine release has dissipated downstream, and there is no leading edge of contamination visible in downstream sections of the San Juan River or Lake Powell. ASPECT was demobilized from the response on August 12, 2015.
- The Environmental Response Team (ERT) are providing support on the response and its activities include:
  - assisting with immediate water treatment, clearing of irrigation canals, and groundwater assessment;
  - assisting with presentation of information at public meetings in Farmington, NM;
  - providing support, including the use of Scientific, Engineering, Response & Analytical Services (SERAS) contract, on health and

- environmental data analysis and presentation;
- providing remote support on longer term water treatment options;
- engaging on data management;
- providing phone support to Region 8 on analytical chemistry and metals analysis; and
- working with HQ EOC on health and safety issues.

**NUMBER OF PERSONNEL INVOLVED:**

Region/State	Current		EPA Personnel in REOC / HQEOC	Contractor Personnel in REOC / HQEOC	Total
	EPA Personnel In Field  (All venues other than EPA Offices)	Current EPA Contractor Personnel in the Field			
Region 8	23	12	13	2	<b>50</b>
Region 6	22	33	20	4	<b>79</b>
Region 9	2	7	2	0	<b>11</b>
HQ EOC	0	8	17	2	<b>27</b>
<b>Total</b>	<b>47</b>	<b>60</b>	<b>52</b>	<b>8</b>	<b>167</b>

**\*HQ EOC numbers reflect personnel supporting the response during the current operational period. Regional numbers reflect personnel responding to the incident on August 13, 2015.**

Tim Grier, Planning Section Chief

U.S. Environmental Protection Agency

Headquarters Emergency Operations Center

1200 Pennsylvania Ave

Washington, DC 20004

202-564-3850

<mailto:eoc.epahq@epa.gov>

<Gold King Mine Management Report - 08.15.2015.doc>